

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

Name of Program/Strategy: Child Development Project

Report Contents

1. Overview and description
 2. Implementation considerations (if available)
 3. Descriptive information
 4. Outcomes
 5. Cost effectiveness report (Washington State Institute of Public Policy – if available)
 6. Washington State results (from Performance Based Prevention System (PBPS) – if available)
 7. Who is using this program/strategy
 8. Study populations
 9. Quality of studies
 10. Readiness for Dissemination
 11. Costs (if available)
 12. Contacts for more information
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1. Overview and description

The Child Development Project (CDP) is a comprehensive, elementary school-based intervention program. CDP incorporates class meetings, learning activities for partners and small groups, and open-ended discussions on literature to enhance students' social, ethical, and intellectual development. CDP is based on the belief that prevention efforts are most likely to be effective when they occur early in a child's development, before antisocial behavioral patterns have a chance to become firmly established. CDP emphasizes the promotion of positive development rather than the prevention of disorder. The central goal of CDP is to help schools become "caring communities of learners" by offering an environment of caring, supportive, and collaborative relationships to build students' sense of community in school and to promote school bonding.

2. Implementation considerations (if available)

Implementation of CDP requires purchasing or acquiring program materials and conducting ongoing staff development for two or more years. CDP program materials include teachers' guides on books in the reading curriculum, a student activity book, a book of anecdotal stories about other CDP teachers, and a video on the language arts curriculum. Additional program materials include teachers' guides for building a sense of community in the classroom and for implementing a "buddies" program, a guide to creating a

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

sense of community in the school, and a family activity book. Each of these additional materials is accompanied by a video.

To implement CDP, teachers attend a two-day summer institute along with three three-day follow-up visits each year (for purposes of observation, coaching, consultation, and additional staff development). Teachers in each participating school receive follow-up visits for two or three years, depending on the school's success at implementing the program.

3. Descriptive Information

Areas of Interest	Substance abuse prevention
Outcomes	1: Youths not using alcohol, tobacco, or illegal drugs 2: Students performing at grade level or meeting state curriculum standards
Outcome Categories	Alcohol Drugs Tobacco
Ages	0-5 (Early childhood) 6-12 (Childhood)
Genders	Male Female
Races/Ethnicities	American Indian or Alaska Native Asian Black or African American Hispanic or Latino White Race/ethnicity unspecified
Settings	School
Geographic Locations	Urban Suburban Rural and/or frontier
Implementation History	
NIH Funding/CER Studies	
Adaptations	
Adverse Effects	
IOM Prevention Categories	Universal

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

4. Outcomes

Outcome 1: Youths not using alcohol, tobacco, or illegal drugs

Description of Measures	
Key Findings	<p>This program received a "promising" rating for the benchmark "Increase the percentage of youths not using alcohol, tobacco, or illegal drugs." Study results indicate that the CDP may contribute to a short-term decrease in the use of alcohol and marijuana.</p> <p>CDP results also seem promising for decreasing students' short-term use of alcohol and marijuana (Battistich et al., 2000)), although follow-up results (Battistich et al., 2004) reported no significant longer-term program effects for either the total sample of students or the high-change group.</p> <p>The extent of CDP implementation may be a significant factor in the success of program outcomes. Outcomes for high-change schools were more positive than for other schools, suggesting that schools with a stronger implementation of the program may experience greater cognitive and behavioral changes among their students than schools with weaker implementation of the program.</p> <p>Finally, it should be noted that the CDP program developers have been authors of all four studies cited in this program description.</p>
Studies Measuring Outcome	
Study Designs	
Quality of Research Rating	

Outcome 2: Students performing at grade level or meeting state curriculum standards

Description of Measures	
Key Findings	<p>This program received a "promising" rating for the benchmark "Increase the percentage of students performing at grade level or meeting state curriculum standards." The evaluations of the CDP indicate that in some cases treatment group students have experienced significant improvements in reading, math, science, and social studies skills when compared with control group students.</p> <p>The program's "promising" rating for the cognitive benchmark is due to mixed findings on the differences in achievement between</p>

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

	<p>treatment and control groups. For example, Solomon et al.'s (1988) study of fourth-grade students did not find any significant academic differences between treatment and control group students, although Solomon et al.'s sixth-grade follow-up study (1996) reported higher reading comprehension scores among treatment group students. Cognitive effects, as seen in Solomon et al. (2000), were very mixed. No differences were found between treatment and control groups on measures of inductive reasoning, and three of the five high-change schools showed no significant positive program effects. Two of the high-change schools did show significant program impacts, although results were mixed among the three program years. Effects on academic measures as reported by Battistich et al. (2004) were also mixed, with no significant differences found between treatment and control groups for the total sample of students, but they found a significantly positive effect favoring the treatment group for the high-change elementary schools.</p> <p>The extent of CDP implementation may be a significant factor in the success of program outcomes. Outcomes for high-change schools were more positive than for other schools, suggesting that schools with a stronger implementation of the program may experience greater cognitive and behavioral changes among their students than schools with weaker implementation of the program.</p> <p>Finally, it should be noted that the CDP program developers have been authors of all four studies cited in this program description.</p>
Studies Measuring Outcome	
Study Designs	
Quality of Research Rating	

5. **Cost effectiveness report** (Washington State Institute of Public Policy – if available)
6. **Washington State results** (from Performance Based Prevention System (PBPS) – if available)
7. **Where is this program/strategy being used (if available)?**

Washington Counties	Oregon Counties

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

8. Study Populations

9. Quality of Research

Evaluation Methods

Solomon et al. (1988) studied the effects of CDP in a sample of 346 students from six elementary schools in a middle- to upper-middle class suburban school district in the San Francisco Bay area. The sample over the five study years consisted of three treatment schools (173 students) and three control schools (163 students), which included 67 classrooms. The six schools that were selected to participate in the study were divided into two roughly equal groups (of three schools each) based on sociodemographic characteristics, student achievement levels, school size, the faculty's teaching experience, and teachers' level of interest in participating in the program. These two groups of schools were then randomly assigned to receive CDP or serve as the control group. The majority of students in all of the schools were white, and there were no baseline differences between the treatment and comparison groups in terms of school size, student mobility, scores on student achievement tests, teachers' length of experience, or teachers' interest in participating in CDP. Children began the program in kindergarten and continued through the fourth grade, although analyses were cross-sectional as opposed to longitudinal (i.e., a different cohort of students provided information during each of the five study years). Students' scores on the California Achievement Test were compared.

Solomon et al. (1996) followed up on the Solomon et al. (1988) sample of students from Northern California. The authors studied learning outcomes among 272 sixth-grade students (157 treatment and 115 control group students) from two treatment and two control schools. (Due to decreased financial support, one treatment school and one control school were not included in the follow-up study.) Although this second study was cross-sectional, many of the students were assessed more than once because the program focused on students in successive grades in each year (e.g., 65 percent of the sixth-grade students had also been assessed in the fourth grade). Extensive baseline assessments of a random sample of students in the treatment and control schools revealed no large or consistent differences between the two groups of students. The outcome measure studied was sixth-grade reading comprehension scores, derived from a test previously developed by the Education Testing Service for the National Assessment of Educational Progress. For the test, students read two brief passages and then wrote responses to general questions about the meaning of the passages.

Battistich et al. (2000) conducted a larger study on sixth-grade students at 24 elementary schools (12 treatment and 12 control schools) from six school districts. The analysis sample consisted of approximately 1,600 students (800 each in the treatment and control groups) in each study year. Twelve of the schools were located on the West Coast of the United States, four in the South, four in the Southeast, and four in the Northeast. They included urban, suburban, and rural schools and served diverse student populations (e.g., 2 percent to 95 percent of students received free or reduced-price school lunches, 26 to 100 percent of students were members of ethnic minority groups, and 0 to 32 percent had limited or no English-speaking skills). Districts were selected based on suggestions from district superintendents and other central office administrators. Comparison schools were chosen that

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

matched the treatment schools as closely as possible with respect to various demographic characteristics. The analysis of outcomes comparing treatment and control groups was cross-sectional. Outcome measures included students' self-reported use of cigarettes, alcohol, and marijuana, and students' self-reported involvement in ten delinquent behaviors during the past year, including throwing objects at people or cars, carrying a weapon, threatening to harm someone, hurting someone on purpose, or being involved in a gang fight. The authors also conducted a separate analysis for "high-change" schools (treatment schools for which most or all of the teachers showed at least moderately positive changes in their degree of CDP implementation from the baseline year).

Solomon et al. (2000) analyzed different program effects in the same sample of students studied by Battistich et al. (2000). Student academic performance was studied through a measure of students' inductive reasoning skills, as well as through standardized tests of reading and math achievement.

Battistich et al. (2004) also conducted a follow-up study to Battistich et al. (2000), tracking students through 6th, 7th, and 8th grades. The sample consisted of six of the original 12 CDP and matched comparison schools. At these schools, an average of 49 percent of students were eligible for free or reduced price school lunches, and an average of 57 percent of students were members of ethnic minorities. By the time the follow-up study was conducted, 35 percent of the original sample of CDP and control group students had graduated from middle school, and an additional 8 percent were unable to be located in the participating school districts. Parental consent to participate in the follow-up study was obtained for 1,246 students, including 700 former CDP students and 546 former control group students. The racial/ethnic background of students was diverse (40 percent White, 32 percent Hispanic, 22 percent African-American, and 5 percent Asian). There were significantly fewer Hispanic students in the CDP group than the control group (28 percent versus 38 percent), and CDP students were significantly more likely than control students to have initiated tobacco use (22 percent versus 13 percent) but significantly less likely to have initiated marijuana use (2 percent versus 6 percent). Outcome measures included past month use of tobacco, alcohol, marijuana, and other elicit drugs; delinquent behaviors (e.g., using weapons in a fight); grade-point average in core academic subjects (language arts, mathematics, science, and social studies), and scores on district-administered achievement tests. Program effects were assessed by comparing the total sample of all treatment and comparison students, as well as by focusing only on students from high-change schools. Sample sizes for the high-change group were approximately 775 students for the behavior variables, and 900 students for the academic achievement data.

Key Evaluation Findings

Results from the Solomon et al. (1988) study of fourth-grade students found:

- There were no significant differences between treatment and control groups on the California Achievement Test.

The Solomon et al. (1996) follow-up study of sixth-grade students reported:

- The treatment group had significantly higher reading comprehension scores than the control group.

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

Battistich et al.'s (2000) study of 24 schools, found, for the total sample, that there was little evidence of program effects on students' involvement in problem behaviors. No significant differences were found between groups in the use of cigarettes or marijuana, carrying weapons, threatening to hurt someone, hurting someone purposely, or involvement in gang fights. The authors reported the following marginally significant findings:

- Compared with control group students, treatment group students exhibited a larger decrease in the use of alcohol.
- Compared with control group students, treatment group students exhibited an increase in the frequency of throwing objects at people or vehicles.

For high-change schools (including five treatment and five control schools), results for the treatment group were somewhat more favorable. The authors reported the following:

- Treatment group students showed a significantly greater decrease in the use of alcohol and marijuana when compared with control group students.
- Treatment group students also showed a marginally significant greater decrease in involvement in gang fights when compared with control group students.
- No significant differences were found between the two groups in cigarette use, throwing objects, carrying weapons, threatening to hurt someone, or hurting someone purposely.

The 24-school study on cognitive effects (Solomon et al., 2000) found the following:

- There was little evidence that CDP had consistent overall effects on achievement.
- The five schools rated as high-change schools showed no significant program impacts on the measure of inductive reasoning.
- Three of the high-change schools showed no significant program impacts on standardized achievement tests, and one of the three schools demonstrated a significantly negative program effect on math achievement. The remaining two schools showed large positive impacts when compared with control schools.

The follow-up study by Battistich et al. (2004), that tracked 1,246 students through middle school, found the following results for the total sample:

- No significant differences between CDP students and control group students for grade point average or achievement test scores.
- No significant differences between groups for use of tobacco, alcohol, cigarettes, or other illicit drugs.
- No significant differences between groups for delinquent behaviors.

For the high-change elementary schools, the authors reported the following:

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

- A significantly positive effect favoring the treatment group for grade point average of core academic subjects.
- A significantly positive effect favoring the treatment group for achievement test scores.
- Treatment group students scored significantly lower on rates of delinquent behaviors.
- No significant differences were found between groups for use of tobacco, alcohol, cigarettes, or other illicit drugs.

Supplementary Materials

Battistich, Victor, Eric Schaps, and Nance Wilson, "Effects of an Elementary School Intervention on Students' "Connectedness" to School and Social Adjustment During Middle School," *The Journal of Primary Prevention*, Vol. 24, No. 3, 2004, pp. 243-262.

Battistich, Victor, Eric Schaps, Marilyn Watson, Daniel Solomon, and Catherine Lewis, "Effects of the Child Development Project on Students' Drug Use and Other Problem Behaviors," *The Journal of Primary Prevention*, Vol. 21, No. 1, 2000, pp. 75-99.

Solomon, Daniel, Marilyn S. Watson, Kevin L. Delucchi, Eric Schaps, and Victor Battistich, *American Educational Research Journal*, Vol. 25, No. 4, 1988, pp. 527-554.

Solomon, Daniel, Marilyn S. Watson, Victor Battistich, Eric Schaps, and Kevin Delucchi, "Creating Classrooms that Students Experience as Communities," *American Journal of Community Psychology*, Vol. 24, No. 6, 1996, pp. 719-748.

Solomon, Daniel, Victor Battistich, Marilyn Watson, Eric Schaps, and Catherine Lewis, "A Six-District Study of Educational Change: Direct and Mediated Effects of the Child Development Project," *Social Psychology of Education*, Vol. 4, No. 1, 2000, pp. 3-51.

Study Strengths

A strength of the program evaluation is that it was conducted by an independent outside evaluator rather than by the program implementers and designers.

Study Weaknesses

A weakness of the program evaluation is that it was difficult to determine which specific program components accounted for the observed significant program effects, due to the large number of program components and inconsistent implementation across sites.

10. Readiness for Dissemination

11. Costs

Excellence in Prevention – descriptions of the prevention programs and strategies with the greatest evidence of success

12. Contacts

For information on research/implementation:

Eric Schaps
Developmental Studies Center
2000 Embarcadero, Suite 305
Oakland, CA 94606-5300
Tel (510) 533-0213
Fax (510) 464-3670
Eric_Schaps@devstu.org

Learn More by Visiting: <http://www.devstu.org>